1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

sepultare. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

Seriland is surrounded with prehistoric works, telling of a numerous population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

Recent Explorations and Surveys

Present knowledge of Seriland and its inhabitants is based primarily on the work of two expeditions by the Bureau of American Ethnology, conducted in 1894 and 1895, respectively; and, secondarily, on researches into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papagueria, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation. Accordingly the party was reorganized at Hermosillo, and, with the sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,

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hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impediments of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasasne, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasasne and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

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481 Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

412 A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and protolithic mullers or hammers are found in numbers in their hands, on [172] their rancheria sites, and in their ancient shell accumulations, while rudely chipped stone arrowp ints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has [439] been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of [439] barter between the Seri and the Sonorenses through which the savages acquired aguardiente, manta, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for 264 any other customary purpose. Among the supplies laid on top of the jacal shown in plate X, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

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life of the tribe ~~states~~: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant custom and also by its employment as the most conspicuous among

FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri thought by immemorial associations: its sherds are sown over the hundred thousand square miles of ancient "despoblado" from Tiburon to Caborca, Magdalena, Rio Opodepe, and Cerro Prieto, and are scattered through the 90 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

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and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serua and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

225 Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various [173] events—births, deaths, journeys, etc—were referred to "The Time of the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1867. The era-marking event was memorable to Mashém, to the elderwomen of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along 172 the western shore of Rada Ballena, near the first sand-spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, [361] hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts' attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the fog shrubbery gave an air of freshness to the site and surroundings. The 172 262 traditions and the relics together made it manifest that "The Time of the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of baisa men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the fatter bones. Some of the ribs were splin- [252] tered and crushed, evidently by blows of the hupf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hupf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

[1] One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

one of the huts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Rada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

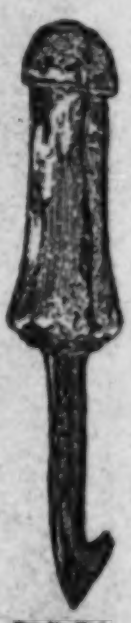

FIG. 21.—Fish-spearhead.

Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Mashém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, i. e., the barbed point and foreshaft, shown in figure 21—the iron point being, of course, accultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1827 Hardy observed a related device:

> They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5°. The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.[1]

Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

[1] Travels, p. 289.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

411 There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-hand information and far-traveled rumor—credit the Seri with habitual use of stone-tipped arrows,[1] and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

[114]

Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens; nearly half of them were tipped with hoop-iron, as illustrated in plate XXX, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrowpoint he was taken aback, and was unable to answer until after lengthy conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-ahk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

FIG. 37.—Seri arrowpoints.

172 The 1895 expedition was slightly more successful in the search for
411 Seri arrows. About midway between the abandoned Rancho Libertad and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an abat, several shells

[1] The most specific reference is that of Hardy: "The men use bows and stone-pointed arrows, but whether they are poisoned, I do not know." Travels, p. 280.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and discarded hupfs, a broken flotile figurine, etc), was the still ruder arrowpoint represented in figure 37b (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrow-points of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and stealage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1709 that when Padre Salvatierra's bilander was beached in Seriland the tribesmen at once began to break her up for the nails (ante, page 67); yet the metal is wrought cold and only with hupf and abat like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacanachito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after benching, a telegraph pole crossbar which had evidently

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I

INTRODUCTION

121 localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

361 I have selected then 25 localities and I shall give
13 their main characteristics below:

1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., [491] connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tepopa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro*. *Ocotillos*, *Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in frequency and size. Along the shores, sand dunes [172] with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. [312] Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flats near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, also along the coast. So named after supposedly [103] numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

[491] 6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

[P. 1 illegible]

documentary data and second, also the archaeological data. The subject matter unfortunately is absent from the first. As for the archaeological data, there is none as yet to date for the area except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. The second visit took place at a most inopportune time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

During the first two weeks of my stay in Desemboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

9:Malkin 2-5 (1963-1966)1962 NU31 Seri NU31

412 the stimulus of the tourist trade, has kept this
285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pima and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archaeological basketry has been unearthed since the [172] work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

[P. 8 B]

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MOLLUSCA

VII

Species	Food Prev.	Food Past	Decoration Prev.	Decoration Past	Trade Prev.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Cadakia distinguenda		x					
Laevicardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cypraea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella broderiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subdudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radians			x				
Ficus ventricosus	x						
Nioche bistrinoca	x	x					

[1]Occasionally used as dip spoon

[2]Supposedly used in the past for money

[3]In the past "giants of 300-400 maybe years ago have eaten it."

[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

262 now," while the *Volsella* has been eaten in the past just as much as it is now. The find of these four ●172 species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

262 The verbal data for the Seris' past use of some species of molluscs in their diet is uncertain or unavailable. But it is safe to assume that if the animal is eaten today, then it certainly had been [174] also eaten in the past. It is not probable that the Seris should suddenly develop a taste for obscure kinds of animal food, while the entire trend had been in the other direction.

Of the different species the augur shell and the cone shell were said to have been "eaten in the past by the giants. Maybe 300-400 years ago." It is [173] hard to account for this idea except that it probably refers to a myth.

Preparation

252 Preparation of the mulluscan food differs little, if at all, from any other food of animal origin. The animals are simply separated from the shell, the meat is dropped in water and boiled, usually [263] for half an hour. Few ingredients other than salt are added and their use depends entirely on the availability of cash and on the individual tastes of the Indians. As far as I could tell, there is no differentiation in this for people of different sexes or ages. Also there is no preference for different 262 parts of the body.

Preferences

Some species are more liked than others, but this is related to their size rather than anything else. There does not appear to be any belief in the toxicity of molluscs and the occasional justification of the inedibility has been expressed in terms of size. Some species, it had been asserted, are not eaten simply because they are too small to bother. Only *Cardium consors*, as one of the in- * [825] formants suggested, is venomous, but even this, to him, seemed uncertain and dubious for he said "maybe it is venomous."

Other Uses

301 a) *Decoration*: A considerable number of shells * 825 were reported as used for decoration. The tabulation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenostira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Trivia radiana* and the *Olive shell* are much

[P. 39 A]

*825 [172] [267] Because seasonal deposits of shells may differ archaeologically and because they do make up an important part of the Seri diet, both now as also in the past, the dominant species for each season are listed below:

Occurring in Summer only	More common in summer
Isognomon chemnitzianus	*Chlamys subnudosa*
Cardium consors	*Eurytellina ruboacens*
Codakia distinguenda	*Acmaea dalliana*
Ficus ventricosus	
Phallium abbreviatum	
Crepidula crepidula	
Trivia radiana	
Occurring in Winter only	**More common in winter**
Pteria peruviana	*Turbo fluctuosa*
Polinices reheriana	*Octopus bimaculatus*
No data	
Volsella capax	
Nisoche bistrionuca	

In three of the species which are present only during the hot season the Seris indicated that they winter buried in mud.

Rhythm

There is a clear suggestion that to the Seri the *Mollusca* show no predilection for either diurnal or nocturnal activity but that they are active both day and night. Data for this had been obtained for 10 species and this answer has been given in every case—merely saying that "it walks day and night." This falls in line quite closely with the Seris' ideas about other creatures of the sea in contrast to the terrestrial animals. There is but very feeble suggestion that some of the fishes are either nocturnal or diurnal. Vast majority are both.

Distribution 1/1

Familiarity with the geographical distribution of the molluscs is for the Seri in a way a function of their familiarity with the particular locality. The largest number of species they cite for the localities in which they regularly camp, the smallest for those they know very little. Thus, the records indicated for the coast of B. C. are only those where the informants indicated by the blanket statement "found everywhere." But this does not mean that they actually cited the animal from such a locality.

In many instances presence or absence of a molluscan has been explained by presence or absence of its favorite habitat. The informants repeatedly pointed out that excessive sandiness of the Kino's shores is responsible for an absence of a great variety of animal there. In other cases, presence of rocks is a requirement for several others. But these matters will be discussed in greater detail under the heading of ecology.

Ecology

The Seris have a very clear-cut idea concerning ecological preferences of the *Mollusca*, a matter which is not too difficult for them to observe.

[P 418] 1/1 [See category 116, pp 64-65 for distribution charts- Analyst.]

642
621 Little information could be elicited about subdivisions 7, 8,
[169] 9, and 10. The reason for this might be that Band VI was slow in
[628] abandoning those coastal areas (if it actually did inhabit them)
as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *?ant i?akimhoh*
642 "they who explain the land," came to Tiburon Island and told the
173 people along the eastern shore that they owned also a corre-
425 sponding strip of land on the mainland. Thus the inhabitants of
167 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly
across the channel from them as shown by the dotted lines on
Fig. 4. They assumed that their new territories extended inland
[822] to include as much terrain as they chose to claim. At first the
people went to their mainland areas primarily to gather cactus
fruit. Eventually some of them remained on the mainland and
established subdivisions 11 and 12. This establishment superseded
the claims of the five Tiburon Island subdivisions to their main-
[101] land territories. Although the mainland subdivisions 11 and 12
formed, in some respects, a separate band in their own right, they
retained their name, *ta?eowkw kongkaak* "the people of Tiburon
Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very
642 little is known. The people of subdivision 13 inhabited an area
131 encompassing the northern end of the dry lake, La Playa Noriega
[829] (San Bartolo). Some of the Seri believe that these people were
giants. Although in this area I have found clay figurines and other
[172] artifacts common to abandoned camps elsewhere, the Seri do not
[173] know the names of the camps of this subdivision. Subdivision 14
occupied the area surrounding the southern end of the same dry
lake.

Subdivision 15 occupied the general area which is now Villa
de Seris, a settlement on the southern edge of Hermosillo. As
[167] Hermosillo grew, it became increasingly difficult for these Seri
to maintain their customary way of life, and they eventually
returned to Tiburon Island.

642 BAND VI
621 Band VI became divided into four subdivisions, the names of
101 which are:

xnitom	"_____"
pahii	"flint"
kofte okl ifa	"large iguana peninsula"
koiih	"tubular"